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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/544,910	04/07/2000	Yadong Huang	06510/121US1	2429

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Bret Field
Bozicevic Field & Francis LLP
200 Middlefield Road
Suite 200
Menlo Park, CA 94025

EXAMINER	
RAWLINGS, STEPHEN L	
ART UNIT	PAPER NUMBER
1642	

DATE MAILED: 01/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Application No.	Applicant(s)	
09/544,910	HUANG ET AL.	
Examiner	**Art Unit**	
Stephen L. Rawlings, Ph.D.	1642	

Offic Action Summary

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 September 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4-8 and 11-35* is/are pending in the application.

4a) Of the above claim(s) *12-35* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4-8 and 11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1,4-8 and 11-35* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. The amendment filed on September 13, 2002 in Paper No. 19 is acknowledged and has been entered. Claims 1 and 5 have been amended.

2. The substitute specification filed September 13, 2002 in Paper No. 20 is acknowledged and has been entered.

3. Claims 1, 4-8, and 11-35 are pending in the application. Claims 12-35 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a non-elected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 6.

4. Claims 1, 4-8, and 11 are currently under prosecution.

Grounds of Claim Rejections Withdrawn

5. Unless specifically reiterated below, the grounds of claim rejections set forth in the previous Office action mailed May 15, 2002 (Paper No. 18) have been withdrawn.

Grounds of Claim Rejections Maintained and Reply to Applicants' Remarks

Claim Rejections – 35 USC § 112, first paragraph

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 1, 4-8, and 11 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention for the reasons set

forth in the previous Office Actions mailed January 29, 2001 (Paper No. 9), August 9, 2001 (Paper No. 12), and May 15, 2002 (Paper No. 18).

Applicants' arguments have been carefully considered but have not been found persuasive.

The Guidelines for Examination of Patent Applications Under the 35 U.S.C. 112, paragraph 1, ``Written Description'' Requirement (66 FR 1099-1111, January 5, 2001) do not have the force of law and are not binding on the Examiner. Any perceived failure by Office personnel to follow the Guidelines constitutes neither grounds for appeal nor petition. See *Id.* at 1104.

MPEP § 2163.02 states, "[a]n objective standard for determining compliance with the written description requirement is, 'does the description clearly allow persons of ordinary skill in the art to recognize that he or she invented what is claimed' ". The courts have decided:

> The purpose of the "written description" requirement is broader than to merely explain how to "make and use"; the applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession *of the invention.* The invention is, for purposes of the "written description" inquiry, *whatever is now claimed.*

See *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d 1555, 1563-64, 19 USPQ2d 1111, 1117 (Federal Circuit, 1991). Furthermore, the written description provision of 35 USC § 112 is severable from its enablement provision; and adequate written description requires more than a mere statement that it is part of the invention and reference to a potential method for isolating it. See *Fiers v. Revel*, 25 USPQ2d 1601, 1606 (CAFC 1993) and *Amgen Inc. V. Chugai Pharmaceutical* Co. *Ltd.,* 18 USPQ2d 1016.

Accordingly, so that one of ordinary skill in the art given benefit of the disclosure, would recognize that Applicants invented that which is claimed in the application, the disclosure must describe the subject matter encompassed by the claims in sufficient detail to reasonably convey to the skilled artisan that the Applicants had possession of that subject matter at the time the application was filed. Therefore, to meet the written description requirement, the disclosure must do more than merely describe a means for making and using the invention. To meet the written description requirement, the

disclosure must include a description of at least a substantial, or at least a representative number of embodiments of the methods encompassed by the claims, and of sufficient detail to satisfy a factual inquiry to determine whether the skilled artisan would have reasonable cause given only benefit of Applicants original disclosure, to accept the assertion set forth in the claims that Applicants had possession of the claimed invention as of the filing date sought.

The *Guidelines* state, "[p]ossession may be shown in a variety of ways including description of an actual reduction to practice, or by showing the invention was 'ready for patenting' such as by disclosure of drawings or structural chemical formulas that show that the invention was complete, or by describing distinguishing identifying characteristics sufficient to show that the applicant was in possession of the claimed invention" (*Id.* at 1104). However, as noted in the previous Office actions, factual evidence of an actual reduction to practice has not been disclosed by Applicants in the specification; nor have Applicants shown the invention was "ready for patenting" by disclosure of drawings or structural chemical formulas that show that the invention was complete; nor have Applicants described distinguishing identifying characteristics sufficient to show that Applicants were in possession of the claimed invention at the time the application was filed.

Moreover, the claims encompass a large genus of widely variant species and thus an adequate written description of the claimed invention must include sufficient description of a representative number of species by actual reduction to practice, reduction to drawings, or by disclosure of relevant, identifying characteristics sufficient to show that Applicants were in possession of the claimed genus. The *Guidelines* state, "[f]or inventions in an unpredictable art, adequate written description of a genus which embraces widely variant species *cannot* be achieved by disclosing only one species within the genus" (Id. at 1106); accordingly, it follows that an adequate written description of a genus cannot be achieved in the absence of a disclosure of at least one species within the genus. Again, the disclosure is devoid of a showing of factual evidence of a reduction to practice of any one species.

Contrary to Applicants' contention, the art is not mature. As noted in the previous Office actions, the courts have determined that antisense technology is highly unpredictable. See *Enzo Biochem Inc. v. Calgene Inc.,* 52 USPQ2d 1129 (CAFC, 1999). Again, although the court acknowledged:

> In view of the rapid advances in science, we recognize that what may be unpredictable at one point in time may become predictable at a later time. See *Vaeck*, 947 F.2d at 496, 20 USPQ2d at 1445 (" [W]e do not imply that patent applicants in art areas currently denominated as 'unpredictable' must never be allowed generic claims encompassing more than the particular species disclosed in their specification.").

(*Id.* at 1143), as evidenced by the teachings of Sohail, et al, Pierce, et al, and Lesson-Wood, et al, the time that antisense technology has advanced to the point of predictability has not yet arrived. The *Guidelines* state, "for inventions in emerging and unpredictable technologies, or for inventions characterized by factors not reasonably predictable which are known to one of ordinary skill in the art, more evidence is required to show possession" than would be required if the relevant art were mature (*Id.* at 1106).

Although the claims are not limited to methods in which said agent is an antisense oligonucleotide, the structures of at least a substantial number of oligonucleotides, or of at least a representative number of oligonucleotides that might be used to successfully practice the claimed invention have not been disclosed. In view of the teachings of Sohail, et al and Pierce, et al, the disclosure of a non-limiting example of a target of an antisense oligonucleotide does not constitute a sufficient description of the genus of oligonucleotides, or of the claimed genus of methods in which said agent is an oligonucleotide to reasonably convey to one skilled in the art that Applicants had possession of the claimed invention at the time the application was filed.

Furthermore, as noted in the previous Office action, despite the disclosure of a list of agents that might be used in practicing the claimed invention, the disclosure of such a "laundry list" of agents does not constitute a written description of every species in the claimed genus, as it would not reasonably lead those skilled in the art to any particular species. See, e.g., *Fujikawa v. Wattanasin*, 93 F.3d 1559, 1571, 39 USPQ2d 1895, 1905 (Fed. Cir. 1996).

Additionally, the courts have decided, "[i]t is not sufficient to define the recombinant molecule by its principal biological activity, e.g., having protein A activity, because an alleged conception having no more specificity than that is simply a wish to know the identity of any material with that biological property" (*Colbert v. Lofdahl*, 21 USPQ2d, 1068, 1071 (BPAI 1992)). Analogously, therefore, the recitation of a limitation requiring the agent to which the claims refer be capable of reducing the amount of plasma active apoE in said host by reducing the expression of apoE by an amount sufficient to reduce VLDL production in said host does not constitute an adequate description of the claimed genus, or an adequate description of a representative number of species by disclosure of relevant, identifying characteristics to show the Applicants were in possession of the claimed genus at the time the application was filed.

In further rebuttal of Applicants' assertion that the Examiner's position is contrary to Office policy, the *Guidelines* state that if the Examiner were unable to provide evidence and sound scientific reasoning to support the position that the written description requirement set forth under 35 USC § 112, first paragraph is not met, then there is a strong presumption that an adequate written description of the claimed invention is present in the application as originally filed. However, "a description as filed is presumed to be adequate, unless or until sufficient evidence or reasoning to the contrary has been presented by the examiner to rebut the presumption" (*Id.* at 1107). As sufficient evidence and sound scientific reasoning have been applied in support of the Office's position, the grounds of rejection under 35 USC § 112, first paragraph set forth in the previous Office Actions are entirely appropriate and proper.

Applicants have noted that the *Guidelines* state that rejection of an original claim for lack of written description should be rare. However, the *Guidelines* further state, "the issue of a lack of written description may arise even for an original claim when an aspect of the claimed invention has not been described with sufficient particularity such that one skilled in the art would recognize that the applicant has possession of the claimed invention" (*Id.* at 1105).

In summary, Applicants' disclosure does not include a description of at least a substantial number of embodiments of the methods encompassed by the claims; nor

does Applicants' disclosure include a description of at least a representative number of embodiments of the methods encompassed by the claims. Accordingly, a skilled artisan in the relevant art would not reasonably conclude that Applicants had possession of the claimed invention at the time the application was filed and therefore the disclosure is considered insufficient to meet the written description requirement of 35 USC § 112, first paragraph.

8. Claims 1, 4-8, and 11 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention for the reasons set forth in the previous Office Actions mailed January 29, 2001 (Paper No. 9), August 9, 2001 (Paper No. 12), and May 15, 2002 (Paper No. 18).

Applicants' arguments have been carefully considered but have not been found persuasive.

The Office has not requested evidence of the safe use of the claimed invention. Applicants are not required under the statutes, or by the Patent and Trademark Office to seek or secure approval by the Food and Drug Administration to use the claimed invention in order to attain patent rights for their invention; however, Applicants are required to meet the enablement requirements set forth under 35 USC § 112, first paragraph.

In view of the preponderance of evidence that has been made of record in the previous Office actions, it is not apparent that the enablement requirement set forth under 35 USC § 112, first paragraph is met by Applicants' disclosure. Applicants, therefore, have the burden of persuading the Office that given only the benefit of the instant disclosure the skilled artisan could have used the claimed invention with a reasonable expectation of success without the need to perform additional, undue experimentation at the time the application was filed.

The factors, which have been considered in determining whether undue experimentation would be required, have been summarized in *Ex parte Forman*, 230

USPQ 546 (BPAI 1986). Considering the nature of the invention, the state of the art at the time the application was filed, the level of skill in the art, the level of predictability in the art, the breadth of the claims and the amount of exemplification disclosed by Applicants, the quantity and type of experimentation that would be required before the claimed invention might be practiced with a reasonable expectation of success in view of such factors is considered undue. Consideration of the factual evidence of record suggests that in order to practice the claimed invention, the skilled artisan would not merely be required to use conventional methodology to perform routine experimentation to have a reasonable expectation of successfully practicing the claimed invention.

Moreover, the amount of guidance, direction, and exemplification set forth in the disclosure is not reasonably commensurate in scope with the claims and would be insufficient to enable the skilled artisan to have a reasonable expectation of successfully using the claimed invention to reduce the plasma level of VLDL in a host, or to treat a host suffering from a disease associated with elevated levels of VLDL without need of performing additional, undue experimentation. Furthermore, it is appropriately noted that the claims are not limited to methods for treating a host using antisense oligonucleotides to reduce the plasma level of VLDL in the host and for that matter, the claims are not limited to a method for treating a host using an antisense oligonucleotide that binds specifically to the genes encoding apoE or their transcripts.

Nevertheless, Applicants have noted that the teachings of Sohail, et al indicate the need to empirically determine the structure of an antisense oligonucleotide that can be used to successfully reduce the expression of a targeted nucleic acid molecule, even given the identity of the target. Additionally, the courts have determined that antisense technology is unpredictable, such that one skilled in the art would not have a reasonable expectation of success in using the claimed invention in which said agent is an antisense oligonucleotide without having the need to perform additional, undue experimentation. The immaturity, or the state of the art, and the lack of predictability associated with the art are further indicated by the teachings of the other references cited in the previous Office actions.

Regarding the breadth of the claims, Applicants have argued that only agents that reduce the expression of apoE are to be contemplated for use in practicing the claimed method. Although one skilled in the art might be capable of ascertaining whether an agent is capable of reducing the expression of apoE, because one would reasonably imagine that the claims encompass many non-working embodiments, which could not be identified by any means other than administering to a host a candidate agent and determining whether or not the agent reduces the plasma level of VLDL in the host by reducing the expression of apoE by an amount sufficient to reduce VLDL production in the host, finding the working embodiments among the possibilities would require undue experimentation. Furthermore, the court has indicated that the more unpredictable an area is, the more specific enablement is necessary in order to satisfy the statute. See *In re Fisher*, 1666 USPQ 19 24 (CCPA 1970). It has been well known to those skilled in the art at the time the invention was made that minor structural differences among structurally related compounds or compositions could result in substantially different biological and pharmacological activities; but, in this instance, the claims encompass the use of widely variant structures to treat host suffering from a disease associated with elevated levels of plasma VLDL, and consequently an even greater amount of guidance, direction, and exemplification is required be reasonably commensurate in scope with the claims.

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claims 5 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention for the reasons set forth in the previous Office Action mailed May 15, 2002 (Paper No. 18).

Claims 5 and 11 are vague and indefinite because claim 5 recites the term "a disease condition associated with elevated plasma levels of VLDL". Recitation of the term renders the claim vague and indefinite because it cannot be ascertained how the

disease condition is required by the claim to be associated with elevated plasma levels of VLDL. Furthermore, it is unclear whether Applicants regard their invention as a method for treating a host suffering from any disease in which elevated levels of plasma VLDL occur. Accordingly, one of ordinary skill in the art would not be reasonably apprised of the metes and bounds of the claimed invention.

Applicants have stated that because the claims have been amended to limit the subject matter regarded as the invention to a method for treating hyperlipidemia, this ground of rejection has been rendered moot. However, as no such amendment has been made, this ground of rejection under 35 USC § 112, second paragraph is maintained.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1, 4-8, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Ditschuneit, et al, as evidenced by Pedreno, et al and Durrington, et al for the reasons set forth in the previous Office Actions mailed January 29, 2001 (Paper No. 9), August 9, 2001 (Paper No. 12), and May 15, 2002 (Paper No. 18).

Applicants have traversed this ground of rejection, arguing that gemfibrozil does not reduce the expression of ApoE. However, Applicants have not provided any factual evidence to support this assertion.

The method of the prior art is deemed the same as the method of the claims, absent a showing of any difference. The Office lacks the facilities to examine and compare Applicant's method with the method of the prior art in order to establish that the method of the prior art differs from the claimed method. In the absence of evidence to the contrary, the burden is upon the applicant to prove that the method is different

than those taught by the prior art. See *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977) and *Ex parte Gray*, 10 USPQ 2d 1922 1923 (PTO Board of Patent Appeals and Interferences).

13. Claims 1, 4-8, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Yoshino, et al for the reasons set forth in the previous Office Actions mailed January 29, 2001 (Paper No. 9), August 9, 2001 (Paper No. 12), and May 15, 2002 (Paper No. 18).

Applicants have traversed this ground of rejection, arguing that prevastatin acts to decrease plasma VLDL by reducing the expression of apoE. Nevertheless, the method of the prior art is deemed the same as the method of the claims, absent a showing of any difference.

As noted in the previous Office action, although prevastatin is known to act as an inhibitor of HMG-CoA reductase, no factual evidence of record has established that the method of the prior art differs from the method of the claims. In fact, since Wyne, et al teach that another inhibitor of HMG-CoA reductase, namely mevinolin acts to attenuate the expression of *apoE* it is clear that although an agent is known to be an inhibitor of HMG-CoA, one cannot rule out the possibility that the agent also acts to inhibit the expression of ApoE.

The Office lacks the facilities to examine and compare Applicant's method with the method of the prior art in order to establish that the method of the prior art differs from the claimed method. In the absence of evidence to the contrary, the burden is upon the applicant to prove that the method is different than those taught by the prior art. See In re Best, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977) and Ex parte Gray, 10 USPQ 2d 1922 1923 (PTO Board of Patent Appeals and Interferences).

14. Claims 1, 4-8, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Connor, et al for the reasons set forth in the previous Office Actions mailed January 29, 2001 (Paper No. 9), August 9, 2001 (Paper No. 12), and May 15, 2002 (Paper No. 18).

Applicants have traversed this ground of rejection, arguing that there is evidence that n-3 fatty acids have act by a mechanism that differs from the mechanism by which the agent of the claims acts. However, the mechanism by which the agent of the claims acts is not disclosed in the specification.

The method of the prior art is deemed the same as the method of the claims, absent a showing of any difference. The Office lacks the facilities to examine and compare Applicants' method with the method of the prior art in order to establish that the method of the prior art differs from the claimed method. In the absence of evidence to the contrary, the burden is upon the applicant to prove that the method is different than those taught by the prior art. See *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977) and *Ex parte Gray*, 10 USPQ 2d 1922 1923 (PTO Board of Patent Appeals and Interferences).

15. Claims 1, 5, 6, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Kaskie, et al (*American Journal of Kidney Diseases* **15**: 8-15, 1990), as evidenced by Wyne, et al (*Journal of Biological Chemistry* **264**: 16530-16536, 1989), for the reasons set forth in the previous Office Action mailed May 15, 2002 (Paper No. 18).

Applicants have traversed this ground of rejection, arguing that Wyne, et al does not teach that mevinolin reduces the expression of apoE. However, as noted in the previous Office action, Wyne, et al suggests that the mechanism by which mevinolin acts involved reducing the expression of apoE. Therefore, the method of Kaskie, et al is deemed the same as the method of the claims, absent a showing of any difference. The Office lacks the facilities to examine and compare Applicants' method with the method of the prior art in order to establish that the method of the prior art differs from the claimed method. In the absence of evidence to the contrary, the burden is upon the applicant to prove that the method is different than those taught by the prior art. See In re Best, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977) and Ex parte Gray, 10 USPQ 2d 1922 1923 (PTO Board of Patent Appeals and Interferences).

Conclusion

16. No claims are allowed.

17. **THIS ACTION IS MADE FINAL.** Applicants are reminded of the extension of time policy as set forth in 37 CFR § 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR § 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

18. This application contains claims 12-35 drawn to an invention non-elected with traverse in Paper No. 6. A complete reply to the final rejection must include cancellation of non-elected claims or other appropriate action (37 CFR § 1.144). See MPEP § 821.01.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen L. Rawlings, Ph.D. whose telephone number is (703) 305-3008. The examiner can normally be reached on Monday-Thursday, alternate Fridays, 8:00AM-5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony C. Caputa, Ph.D. can be reached on (703) 308-3995. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-4242 for regular communications and (703) 308-4242 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0196.

Stephen L. Rawlings, Ph.D.
Examiner
Art Unit 1642

slr
January 6, 2003

ANTHONY C. CAPUTA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600